



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/689,559

10/20/2003

Gerald R. Malan

A0781-701810

8394

37462 7590 02/04/2009  
LOWRIE, LANDO & ANASTASI, LLP  
ONE MAIN STREET, SUITE 1100  
CAMBRIDGE, MA 02142

EXAMINER

GOODCHILD, WILLIAM J

ART UNIT

PAPER NUMBER

2445

NOTIFICATION DATE

DELIVERY MODE

02/04/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

docketing@ll-a.com  
gengelso@ll-a.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/689,559	<b>Applicant(s)</b> MALAN ET AL.	
	<b>Examiner</b> WILLIAM J. GOODCHILD	<b>Art Unit</b> 2445	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 November 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7,10,13-16 and 19-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7,10,13-16 and 19-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/24/08 has been entered.

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claim 21 recites the limitation "the apparatus" in line 5. There is insufficient antecedent basis for this limitation in the claim.
3. Claim 21 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 21, line 7, the phrase "and store the authoritative mapping in the database". It is unclear if this database is referring to the domain name databases in

Art Unit: 2445

line 2, although line 10 also claims "a database" which seems to be different then the domain name databases of line 2.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 4-5, 7, 10, 13-16 and 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hrabik et al., (US Publication No. 2002/0178383), (hereinafter Hrabik), and further in view of Albitz et al., (DNS and BIND), (hereinafter Albitz).

Regarding claim 1, Hrabik discloses determining a first mapping in a domain naming system [Hrabik, paragraph 69, lines 4-7], the act of determining the first mapping comprising an act of obtaining an authoritative mapping from an authoritative source [Hrabik, paragraph 69];

determining a second mapping in the domain naming system [Hrabik, paragraph 69], the act of determining a second mapping comprising acts of querying a nameserver of the list of nameservers to be queried and receiving a response from the nameserver, the response containing the second mapping [Hrabik, paragraph 69], wherein the first mapping is a first namespace mapping that maps a first name to a first resource and the

Art Unit: 2445

second mapping is a second namespace mapping that maps a second name to a second resource [Hrabik, paragraph 69];

comparing the first mapping to the second mapping [Hrabik, paragraph 69] and identifying at least one discrepancy between the first and second mapping [Hrabik, paragraphs 15 and 29]; and

generating and sending an alert message to a user, the alert message indicating the at least one discrepancy between the first and second mapping [Hrabik, paragraphs 15, 29 and 69].

Hrabik does not specifically disclose compiling a list of nameservers to be queried comprising acts of:

sending a namespace mapping resolution query to a plurality of network nodes;

waiting for one or more responses from the plurality of network nodes;

determining whether a network node in the plurality of network nodes is a nameserver

based on a format of one or more responses received from the network node; and

if the network node is a nameserver, adding the network node to the list of nameservers to be queried.

However, Albitz discloses creating a list of nameservers [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph and page 220, Zone Transfers, paragraph 3, lines 2-3].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate creating a list of nameservers in order to assist in the testing of name resolution and allow for maintaining records of nameservers to check / verify again.

Art Unit: 2445

Albitz further discloses sending a namespace mapping resolution query to a plurality of network nodes [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie - List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver];

waiting for one or more responses from the plurality of network nodes [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie - List all data into /tmp/movie', after typing in the request, the response will print out on screen or to a file as requested in this example, from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver];

determining whether a network node in the plurality of network nodes is a nameserver [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie - List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver] based on a format of one or more responses received from the network node [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie - List all data into /tmp/movie',

Art Unit: 2445

from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver]; and

if the network node is a nameserver, adding the network node to the list of nameservers to be queried [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph and page 220, Zone Transfers, paragraph 3, lines 2-3].

Regarding claim 4, Hrabik-Albitz further discloses the authoritative source is at least one of: an authoritative nameserver; and a database storing a plurality of authoritative mappings [Hrabik, paragraph 69, lines 3-7].

Regarding claim 5, Hrabik-Albitz further discloses an act of reporting the at least one discrepancy to a user [Hrabik, paragraphs 15, 29 and 69].

Regarding claim 7, Hrabik-Albitz further discloses the first namespace mapping is stored on an authoritative nameserver and the act of determining a first mapping comprises an act of obtaining the first mapping from the authoritative nameserver [Hrabik, paragraph 69].

Regarding claim 10, Hrabik-Albitz further discloses the act of querying a nameserver comprises an act of requesting at least one namespace mapping record from the nameserver [Hrabik, paragraph 69].

Regarding claim 13, Hrabik-Albitz further discloses the act of determining comprises an act of determining that a network node in the plurality of nodes is not a nameserver if the network node does not respond to the namespace mapping resolution query [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie – List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver].

Regarding claim 14, Hrabik-Albitz further discloses the act of compiling a list of at least one nameserver comprises an act of: listening for a request from a non-authoritative nameserver to an authoritative nameserver [Albitz, page 217, paragraph 4, lines 1-4, 'When a BIND name server gets a query, it looks for the answer in its cache. If it doesn't have the answer, and it is authoritative for the domain, the name server responds that the name doesn't exist or that there is no data for that type.', paragraph 5, lines 4-6, When the name server receives a response from one of the remote name servers, it caches the response]; and when the request is detected, adding the non-authoritative nameserver to a list of nameservers, [Albitz, page 217, paragraph 5, lines 4-6, 'When the name server receives a response from one of the remote name servers, it caches the response', caching the response is adding the nameserver to a list of nameservers to use in the future].



Regarding claim 15, Hrabik-Albitz further discloses the request is a resolve request [Albitz, page 211, from nslookup routine, 'slate.mines.Colorado.edu.' provides a first mapping, from paragraph 1, this is an authoritative lookup].

Regarding claim 16, Hrabik-Albitz further discloses sending a namespace mapping resolution query to a plurality of network nodes [page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie – List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver] from a monitoring computer system that monitors namespace mapping violations [Hrabik, paragraphs 11 and 14];

waiting for one or more responses from the plurality of network nodes [page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie – List all data into /tmp/movie', after typing in the request, the response will print out on screen or to a file as requested in this example, from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver];

determining whether a network node in the plurality of network nodes is a nameserver [page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole

Art Unit: 2445

zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie – List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver]; and

storing, in a storage device in the monitoring computer system, an indication that the network node is a nameserver in response to the act of determining [page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu > /tmp/movie – List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e. 'NS' identifies a nameserver, 'MX' identifies a mailserver], the indication of the network node being stored in a list of nameservers to be queried by the monitoring computer system to determine namespace mapping violations [Hrabik, paragraphs 15, 29 and 69];

determining a first mapping in a domain naming system, the act of determining the first mapping comprising an act of obtaining an authoritative mapping from an authoritative source [Hrabik, paragraph 69];

determining a second mapping in the domain naming system, the act of determining a second mapping comprising acts of querying a nameserver of the list of nameservers to be queried and receiving a response from the nameserver, the response containing the second mapping, wherein the first mapping is a first namespace mapping that maps a first name to a first resource and the second mapping is a second namespace mapping that maps a second name to a second resource [Hrabik, paragraph 69];

Art Unit: 2445

comparing the first mapping to the second mapping and identifying at least one discrepancy between the first and second mapping [Hrabik, paragraphs 15, 29 and 69]; generating and sending an alert message to a user, the alert message indicating the at least one discrepancy between the first and second mapping [Hrabik, paragraphs 15, 29 and 69].

Regarding claim 19, Hrabik-Albitz further discloses listening for a request from a non-authoritative nameserver to an authoritative nameserver [Albitz, page 217, paragraph 5, lines 4-6, When the name server receives a response from one of the remote name servers, it caches the response];

when the request is detected, adding the non-authoritative nameserver to a list of nameservers [Albitz, page 217, paragraph 5, lines 4-6, When the name server receives a response from one of the remote name servers, it caches the response]; and

storing the list of nameservers in a memory of a monitoring computer system [Albitz, page 217, paragraph 5, lines 4-6, When the name server receives a response from one of the remote name servers, it caches the response], the list of nameservers to be queried by the monitoring computer system to determine namespace mapping violations [Hrabik, paragraphs 15, 29 and 69];

determining a second mapping in the domain naming system, the act of determining a second mapping comprising acts of querying a nameserver of the list of nameservers to be queried and receiving a response from the nameserver, the response containing the second mapping, wherein the first mapping is a first namespace mapping that maps a

Art Unit: 2445

first name to a first resource and the second mapping is a second namespace mapping that maps a second name to a second resource [Hrabik, paragraph 69];  
comparing the first mapping to the second mapping and identifying at least one discrepancy between the first and second mapping [Hrabik, paragraphs 15, 29 and 69];  
generating and sending an alert message to a user, the alert message indicating the at least one discrepancy between the first and second mapping [Hrabik, paragraphs 15, 29 and 69].

Regarding claim 20, Hrabik-Albitz further discloses the request is a resolve request [Albitz, page 211, from nslookup routine, 'slate.mines.Colorado.edu.' provides a first mapping, from paragraph 1, this is an authoritative lookup].

Regarding claim 21, Hrabik-Albitz further discloses a detector adapted to determine a first mapping and a second mapping [Hrabik, paragraph 69] wherein the detector is further adapted to compare the first mapping to the second mapping [Hrabik, paragraph 69] and to identify at least one discrepancy between the first mapping and second mapping [Hrabik, paragraphs 15 and 29], wherein the apparatus is configured to obtain an authoritative mapping from an authoritative source and store the authoritative mapping in the database [Hrabik, paragraphs 44 and 69];  
a discoverer adapted to discover at least one nameserver among a plurality of network nodes [Albitz, page 220, Zone Transfers, 1<sup>st</sup> paragraph, 'nslookup can be used to transfer a whole zone using the ls command', page 221, line 26, '> ls -t any movie.edu

Art Unit: 2445

> /tmp/movie – List all data into /tmp/movie', from the list starting on line 29, you can see the mapping resolution from hostnames to ip address and the type of server, i.e.

'NS' identifies a nameserver, 'MX' identifies a mailserver];

a database configured to store the first mapping and the second mapping [Hrabik, paragraphs 44 and 69] and a list of a plurality of discovered nameservers [Hrabik, paragraphs 44 and 69], including the at least one nameserver, wherein the apparatus is configured to query the at least one nameserver [Hrabik, paragraph 69], and store the second mapping contained within a response received from the nameserver [Albitz, page 217, paragraph 5, lines 4-6, When the name server receives a response from one of the remote name servers, it caches the response],

wherein the discoverer is adapted to send a namespace mapping resolution query to a plurality of network nodes [Hrabik, paragraph 69], wait for one or more responses from the plurality of network nodes [Hrabik, paragraph 69], determine whether a network node in the plurality of network nodes is a nameserver based on a format of one or more responses received from the network node [Hrabik, paragraph 69], and if the network node is a nameserver, storing the network node to the list of nameservers to be queried [Hrabik, paragraph 69]; and

a component adapted to generate an alert message and send the alert message to a user, the alert message indicating the at least one discrepancy between the first mapping and the second mapping [Hrabik, paragraphs 15, 29 and 69].

***Response to Arguments***

6. Applicant's arguments with respect to claim 1, 4-5, 7, 10, 13-16 and 19-21 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Examiner's Note: Examiner has cited particular paragraphs / columns and line numbers in the reference(s) applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the cited passages as taught by the prior art or relied upon by the examiner.

Should applicant amend the claims of the claimed invention, it is respectfully requested that applicant clearly indicate the portion(s) of applicant's specification that support the amended claim language for ascertaining the metes and bounds of applicant's claimed invention

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM J. GOODCHILD whose telephone number is

Art Unit: 2445

(571)270-1589. The examiner can normally be reached on Monday - Friday / 8:00 AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (571) 272-3949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Patrice Winder/  
Primary Examiner, Art Unit 2445

WJG  
01/23/2009